

May 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Art Unit	:	Customer No.: 035811
Examiner	:	
Serial No.	:	10/552,384
Filed	:	October 7, 2005
Inventors	:	Daniel LeComte Jérôme Caporossi
Title	:	SCRAMBLING, DESCRAMBLING AND SECURE DISTRIBUTION OF AUDIO- VISUAL SEQUENCES FROM VIDEO ENCODERS BASED ON WAVELET PROCESSING
		Docket No.: BDM-05-1554
		Confirmation No.: 4757

Dated: May 8, 2006

**EXPRESS MAIL CERTIFICATION**

**37 C.F.R. §1.10**

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Date of Deposit: May 8, 2006

Description of Contents: Postcard, Transmittal Letter, first page of the Written Opinion  
dated 03/02/06, and English translation of the Written Opinion.

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR §1.10 on the date indicated above and is addressed to **Mail Stop PCT**, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Victorine Blanche Meise

*Victorine B. Meise*  
(Signature of person mailing paper or fee)

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**TRANSMITTAL LETTER**

**Mail Stop PCT**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Following up on the Information Disclosure Statement filed December 13, 2005, we enclose a copy of the first page of the Written Opinion dated March 2, 2006 and an English translation of the Opinion for the Examiner's convenience.

Respectfully submitted,



T. Daniel Christenbury  
Reg. No. 31,750

TDC:vbm  
(215) 656-3381

RAPPORT PRÉLIMINAIRE INTERNATIONAL SUR LA BREVETABILITÉ  
(chapitre I du Traité de coopération en matière de brevets)

IP DEPT.

(règle 44bis du PCT)

Référence du dossier du déposant ou du mandataire 33458/PCT	POUR SUITE À DONNER	Voir le point 4 ci-dessous
Demande internationale no. PCT/FR2004/000947	Date du dépôt international ( <i>jour/mois/année</i> ) 16 April 2004 (16.04.2004)	Date de priorité ( <i>jour/mois/année</i> ) 16 April 2003 (16.04.2003)
Classification internationale des brevets (8 <sup>e</sup> édition, sauf indication d'une édition antérieure) Voir les informations pertinentes dans le formulaire PCT/ISA/237		
Déposant MEDIALIVE		

1. Le présent rapport préliminaire international sur la brevetabilité (chapitre I) est établi par le Bureau international au nom de l'administration chargée de la recherche internationale selon la règle 44bis.1.a).

2. Ce RAPPORT comprend un total de 7 feuilles, y compris la présente feuille de couverture.

Dans les feuilles jointes, toute référence à l'opinion écrite de l'administration chargée de la recherche internationale doit être entendue, à la place, comme une référence au rapport préliminaire international sur la brevetabilité (chapitre I).

3. Le présent rapport contient des indications relatives aux points suivants :

<input checked="" type="checkbox"/> Cadre n° I	Base de l'opinion
<input type="checkbox"/> Cadre n° II	Priorité
<input type="checkbox"/> Cadre n° III	Absence de formulation d'opinion quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle
<input type="checkbox"/> Cadre n° IV	Absence d'unité de l'invention
<input checked="" type="checkbox"/> Cadre n° V	Déclaration motivée selon l'article 35.2) quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle; citations et explications à l'appui de cette déclaration
<input type="checkbox"/> Cadre n° VI	Certains documents cités
<input type="checkbox"/> Cadre n° VII	Certaines irrégularités relevées dans la demande internationale
<input type="checkbox"/> Cadre n° VIII	Certaines observations relatives à la demande internationale

4. Le Bureau international communiquera le présent rapport aux offices désignés conformément aux règles 44bis.3.c) et 93bis.1 mais pas avant l'expiration du délai de 30 mois à compter de la date de priorité (règle 44bis.2), sauf si le déposant a présenté une requête expresse à cet égard en vertu de l'article 23.2).

Date d'établissement du présent rapport  
02 March 2006 (02.03.2006)

Bureau international de l'OMPI 34, chemin des Colombettes 1211 Geneva 20, Switzerland no de télécopieur +41 22 740 14 35	Fonctionnaire autorisé  Beate Giffo-Schmitt no de téléphone : +41 22 338 87 20
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# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

**PCT**

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference <b>33458/PCT</b>		Date of mailing (day/month/year)	
International application No. <b>PCT/FR2004/000947</b>		FOR FURTHER ACTION See paragraph 2 below	International filing date (day/month/year) <b>16.04.2004</b>
Priority date (day/month/year) <b>16.04.2003</b>			
International Patent Classification (IPC) or both national classification and IPC			
Applicant <b>MEDIALIVE</b>			

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP	Authorized officer
Facsimile No.	Telephone No.

Translation

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/FR2004/000947

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

This opinion has been established on the basis of a translation from the original language into the following language

, which is the language of a translation furnished for the purposes of international search (under

Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

a sequence listing

table(s) related to the sequence listing

b. format of material

in written format

in computer readable form

c. time of filing/furnishing

contained in the international application as filed.

filed together with the international application in computer readable form.

furnished subsequently to this Authority for the purposes of search.

3.  In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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International application No.  
PCT/FR2004/000947

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																									
<p>1. Statement</p> <table> <tr> <td>Novelty (N)</td> <td>Claims</td> <td>1-24</td> <td>YES</td> </tr> <tr> <td></td> <td>Claims</td> <td></td> <td>NO</td> </tr> <tr> <td>Inventive step (IS)</td> <td>Claims</td> <td></td> <td>YES</td> </tr> <tr> <td></td> <td>Claims</td> <td>1-24</td> <td>NO</td> </tr> <tr> <td>Industrial applicability (IA)</td> <td>Claims</td> <td>1-24</td> <td>YES</td> </tr> <tr> <td></td> <td>Claims</td> <td></td> <td>NO</td> </tr> </table>			Novelty (N)	Claims	1-24	YES		Claims		NO	Inventive step (IS)	Claims		YES		Claims	1-24	NO	Industrial applicability (IA)	Claims	1-24	YES		Claims		NO
Novelty (N)	Claims	1-24	YES																							
	Claims		NO																							
Inventive step (IS)	Claims		YES																							
	Claims	1-24	NO																							
Industrial applicability (IA)	Claims	1-24	YES																							
	Claims		NO																							
<p>2. Citations and explanations:</p> <p>1. Reference is made to the following documents:</p> <p>D1: ISO/IEC JTC1/SC 29/WG1: "Medialiving, a new concept in data protection" ISO/IEC JTC 1/SC 29/WG 1, number N2881 11 March 2003 (2003-03-11), pages 1-10, XP002328030</p> <p>D2: MOYANO E ET AL: "Efficient 3D wavelet transform decomposition for video compression" DIGITAL AND COMPUTATIONAL VIDEO, 2001.</p> <p>PROCEEDINGS. SECOND INTERNATIONAL WORKSHOP ON 8 to 9 February 2001, PISCATAWAY, NJ, USA, IEEE, 8 February 2001 (2001-02-08), pages 118-125, XP010547450 ISBN: 0-7695-1110-4</p> <p>2. INDEPENDENT CLAIM 1</p> <p>2.1 The present application fails to comply with the requirements of PCT Article 33(1) since the subject matter of independent claim 1 does not involve an inventive step as defined in PCT Article 33(3).</p> <p>D1, considered as being the closest prior art of</p>																										

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Box No. V **Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

the subject matter of claim 1, describes (the references between parentheses apply to this document):

"Method for the secure distribution" of encoded images "according to a digital stream format obtained from encoding based on a wavelet treatment" (D1, page 2, paragraph (2.)), *first sentence; where the considered format is format JPEG2000*) "composed of frames comprising blocks containing wavelet coefficients describing the visual elements" (D1, page 2, paragraph (3.)), *where according to format JPEG2000, the encoded image is a frame, comprising blocks (code-blocks), containing wavelet coefficients*), where " before transmitting to a client's equipment, a stream analysis is conducted to generate a main modified stream by removing and replacing certain information that encodes the original stream and that has the format of the original stream, and complementary information of any format, having said digital information that encodes the original stream that can be used to reconstruct said modified frames" (D1, Figures I, III, IV and V; Paragraphs 3.2 and 3.3), "then separately transmitting said main modified stream and said complementary information thus generated from the server to the destination equipment" (D1, paragraphs 3.3 and 3.4).

Therefore, the subject matter of claim 1 differs from this known distribution method in that:

The distributed content is a video sequence

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Box No. V      Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Therefore, the problem that the present invention proposes to solve can be considered as being: How to use the method disclosed in D1 to distribute in a secure manner an encoded video sequence? (P)

The solution to this problem, as proposed in claim 1 of the present application, is not considered inventive (PCT Article 33(3)), for the following reasons:

The generalization of wavelet transformation from the two-dimensional case to the three-dimensional case, as well as transposing to the temporal plane of subband encoding properties (scalability), was part of general knowledge in the field of video sequence encoding on the date the present application was filed. For exemplary purposes, see the introduction and paragraph III of D2 (published in 2001).

The person skilled in the art facing the problem (P) and having at his disposal D1, would therefore be incited, by his general knowledge, to apply the method of secure distribution from D1 to encoded video files following a three-dimensional wavelet encoding model. Applying the treatment methods for wavelet coefficients disclosed in D1 to coefficients resulting from three-dimensional wavelet decomposition would not have required an inventive step by the person skilled in the art.

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Box No. V **Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

3. INDEPENDENT CLAIM 29

The same argument applies *mutatis mutandis* to the subject matter of corresponding independent claim 29, which is thus also not inventive.

4. DEPENDENT CLAIMS 2-28

Dependent claims 2-28 do not contain any feature which, in combination with the features of any one of the claims to which they refer, meets the requirements of the PCT in respect to inventive step, see D1 and D2 and the corresponding passages cited in the search report.